

THE CLAIMS

1. (currently amended) A method for reducing the incidence or severity of vascular hyperreactivity in vascular muscle cells ~~a patient in need thereof comprising exposing the vascular muscle cells to administering to the patient~~ an effective amount of a selective estrogen beta receptor agonist that has a higher relative selectivity than does genistein for estrogen receptor beta compared to estrogen receptor alpha.
2. (currently amended) The method of claim 1 wherein the vascular hyperreactivity of the patient is manifested by coronary arterial vasospasm.
3. (currently amended) The method of claim 1 wherein the vascular hyperreactivity of the patient is manifested by hyperreactivity of peripheral arteries.
4. (original) The method of claim 1 wherein the estrogen beta receptor agonist is 5 α -androstane-3 β ,17 β -diol.
5. (original) The method of claim 1 wherein the estrogen beta receptor agonist is a derivative of 5 α -androstane-3 β ,17 β -diol that has estrogen beta receptor agonist activity.
6. (original) The method of claim 5 wherein the derivative of 5 α -androstane-3 β ,17 β -diol is selected from the group consisting of 5 α -androstane-3 β ,17 β -diol-3 hemisuccinate,

5 α -androstan-3 β ,17 β -diol-17-sulphate sodium salt, 5 α -androstan-3 β ,17 β -diol-3-acetate, 5 α -androstan-3 β ,17 β -diol-17-acetate, 5 α -androstan-3 β ,17 β -diol-diacetate, 5 α -androstan-3 β ,17 β -diol-dibenzoate, 5 α -androstan-3 β ,17 β -diol-dihemisuccinate, 5 α -androstan-3 β ,17 β -diol-dipropionate, and 5 α -androstan-3 β ,17 β -diol-17-hexahydrobenzoate.

7. (original) The method of claim 1 wherein the estrogen beta receptor agonist is epiestriol.

8. (previously presented) The method of claim 1 wherein the estrogen beta receptor agonist is diarylpropionitrile.

9. (currently amended) The method of claim 4 wherein the 5 α -androstane-3 β ,17 β -diol is administered to a patient and the amount of 5 α -androstane-3 β ,17 β -diol that is administered is sufficient to obtain a serum concentration of between 30 and 3000 pg/ml.

10. (original) The method of claim 9 wherein the amount of 5 α -androstane-3 β ,17 β -diol that is administered is sufficient to obtain a serum concentration of between 30 and 300 pg/ml.

11. (currently amended) The method of claim 1 wherein the estrogen beta receptor agonist is co-administered administered to a patient in concert with a hormone replacement therapy.

12. (original) The method of claim 11 wherein the hormone replacement therapy is selected from the group consisting of estrogen, androgen, and progestin therapy.

13. (currently amended) The method of claim 1 wherein the exposure of the vascular muscle cells to the estrogen beta receptor agonist is by administering the estrogen beta receptor agonist administered to the patient by topical application to skin of a patient.

14. (original) The method of claim 13 wherein the estrogen beta receptor agonist is in a topical preparation selected from the group consisting of a liquid, cream, gel, lotion, ointment, and transdermal patch.

15. (currently amended) The method of claim 1 wherein the exposure of the vascular muscle cells to the estrogen beta receptor agonist is administered to the patient by other than topical administration to skin.

16. (original) The method of claim 15 wherein the exposure administration is by oral, rectal, vaginal, topical, sublingual, nasal, intradermal, inhalation, or sustained implant administration routes.

17. (withdrawn) A kit for administering an estrogen beta receptor agonist compound to a patient suffering from or at risk of vascular hyperreactivity comprising a container, a topical preparation containing an estrogen beta receptor agonist in the container, and

instructions for dispensing an amount of the preparation which provides an amount of the estrogen beta receptor agonist that is effective to prevent or reduce the severity of vascular hyperreactivity.

18. (withdrawn) The kit of claim 17 wherein the estrogen beta receptor agonist is 5 α -androstane-3 β ,17 β -diol.

19. (withdrawn) The kit of claim 17 wherein the estrogen beta receptor agonist is a derivative of 5 α -androstane-3 β ,17 β -diol that has estrogen beta receptor agonist activity.

20. (withdrawn) The kit of claim 19 wherein the derivative of 5 α -androstane-3 β ,17 β -diol is selected from the group consisting of 5 α -androstane-3 β ,17 β -diol-3 hemisuccinate, 5 α -androstane-3 β ,17 β -diol-17-sulphate sodium salt, 5 α -androstane-3 β ,17 β -diol-3-acetate, 5 α -androstane-3 β ,17 β -diol-17-acetate, 5 α -androstane-3 β ,17 β -diol-diacetate, 5 α -androstane-3 β ,17 β -diol-dibenzoate, 5 α -androstane-3 β ,17 β -diol-dihemisuccinate, 5 α -androstane-3 β ,17 β -diol-dipropionate, and 5 α -androstane-3 β ,17 β -diol-17-hexahydrobenzoate.

21. (withdrawn) The kit of claim 17 wherein the estrogen beta receptor agonist is epiestradiol.

22. (withdrawn) The kit of claim 17 wherein the estrogen beta receptor agonist is genistein or diarylpropionitrile.

23. (withdrawn) The kit of claim 17 wherein the topical preparation is selected from the group consisting of a liquid, cream, gel, lotion, ointment, and transdermal patch.